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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,419	10/23/2003	J. Rodney Walton	020554	2594

23696 7590 05/05/2010

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EXAMINER	
SMITH, MARCUS	
ART UNIT	PAPER NUMBER
2467	

NOTIFICATION DATE	DELIVERY MODE
05/05/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/693,419	WALTON ET AL.	
	Examiner	Art Unit	
	MARCUS R. SMITH	2467	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *116-125,217-221 and 225-247* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *116-119, 121-124, 217-221, 225-227, and 229-240* is/are rejected.

7)☒ Claim(s) *120,125,228 and 241-247* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1/14/10, 1/14/10, 1/14/10, 4/08/10.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/14/10 has been entered.

Response to Amendment

2. The amendment filed on 1/14/10 is sufficient to overcome the previous prior art references.

Response to Arguments

3. Applicant's arguments with respect to claims 116-119, 121-124, 217-220, 225-227, and 229-240 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 217-221 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In accordance with the new USPTO's "Interim Patent Subject Matter Eligibility Examination Instructions" issued on August 24, 2009, 101 rejections will be applied if the claimed computer readable medium (even

storage medium, for example) is not clearly defined to exclude non-statutory transitory media such as signals or transmission media. The 101 rejection can be overcome if the claim recites non-transitory media AND the specification is amended to recite that the media is non-transitory media.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 116-119, 121-124, 217-220, 225-227, and 229-240 are rejected under 35 U.S.C. 103(a) as being unpatentable over as being unpatentable over Li et al. (US 2002/0163879) in view of Sjoberg (US 7,023,826) and Kim et al. (US 2003/0119452).

With regard to claims 116, 121, 217, 237, Li et al. teaches: An apparatus in a wireless multiple-access multiple- input multiple-output (MIMO) communication system (page 2, paragraph 19), comprising: a transmit data processor operative to process system parameters and a pilot for transmission via a broadcast channel (page 2, paragraph 28: the examiner views the pilot that has multi purposes functions as the pilot and system parameters.) , wherein the pilot is used for channel estimation of the downlink (paragraph 28), process scheduling information (cluster allocation) for transmission via a forward control channel ((downlink common control channel): page 3,

paragraph 33), wherein the scheduling information is for data transmission on the downlink and an uplink (page 6, paragraph 74), and process traffic data for transmission via a forward channel (dedicated downlink traffic channel, page 3, paragraph 33); and a receive data processor operative to process user requests for system access received via a random access channel, and process traffic data received via a reverse channel (A dedicated traffic channel from the subscriber to base station is an uplink channel, page 3, paragraph 34).

Li et al. fails to disclose the using a random access channel to process user request for system access. However, Li does teach how the subscriber uses an predefined uplink access channel to send feedback information, which contains to subscriber's request for the coding/modulation rate for the cluster it wants to use for communication (see step 103 discussed in page 2, paragraph 29, and also see page 3, paragraphs 31-32,34-35).

Sjoberg et al. teaches an OFDM system for communicating with base station/access point to mobile terminal/subscriber similar to Li et al. In Figure 3, Sjoberg teaches a frame that has broadcast channel, forward control channel, and data downlink channel (column 2). Sjoberg specifically teaches how the mobile terminal request for system access is via random access channel to the access point (column 2, lines 45-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to use the random access channel to process users request for system access as taught by Sjoberg in the system of Li et al. in order to

have an energy efficient way of communicating in the OFDM system (column 1, lines 5-10). Thus, Li et al. in combination with Sjoberg will send the feedback information/user requests through the random access channel instead of any uplink access channels.

However, Li and Sjoberg fail to disclose wherein at least one channel among the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel is configurable, and wherein the system parameters indicate configuration of the at least one configurable channel. Ho

Similar to combination of Li and Sjoberg, Kim et al. teaches a system has a broadcast channel to transmit system information and pilot information for frame and cell synchronization (page 5, paragraph 76: see figure 5) . And Kim also teaches how the system has a random access channel, which is used to receive UE (user) request to access the system (pages 5-6, paragraph 84). In response to UE request the system transmits a setup message before transmitting traffic data (page 5, paragraph 79: see step 503 of figure 3). In figure 20, Kim shows how the forms each downlink and uplink channels according to that setup information (page 20, paragraph 200), wherein the information used to for the channels are channel code, channel code type, and slot format information (page 28, paragraphs 252-256). Since slot formation includes information on a length or duration of certain periods for the channel (page 5, paragraph 78), then every channel in this system is configurable.

Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to any channel system being configurable according to information in setup message as taught by Kim as a part of the time and frequency

synchronization process in the system of Li and Sjoberg in order to further control transmission power which improves the service quality of the network (page 1, paragraph 10).

With regard to claims 117, 122, 218, 238, Sjoberg teaches: wherein the broadcast channel, forward control channel, forward channel, random access channel, and reverse channel are time division multiplexed within a frame having a predetermined time duration (column 2, lines 39-46).

With regard to claims 118, 123, 219, 239, Li teaches: wherein the broadcast channel and the forward control channel are transmitted using a diversity mode supporting data transmission with redundancy from a plurality of transmit antennas (page 6, paragraph 75).

With regard to claims 119, 124, 220, 240,Li teaches: wherein the forward channel and the reverse channel support a diversity mode and a spatial multiplexing mode, the diversity mode supporting data transmission with redundancy from a plurality of transmit antennas, and the spatial multiplexing mode supporting data transmission on a plurality of spatial channels (paragraph 19).

With regard to claim 225, Li et al teaches: means for processing a beacon pilot for transmission via the broadcast channel, wherein the beacon pilot is used for frequency and system acquisition (time and frequency synchronization, paragraph 28).

With regard to claim 226, Kim also teaches: wherein the system parameters comprise at least one parameter for the forward control channel (step 2011: form DL

informal DPCCH which can be viewed as forward control channel. And see page 28, paragraph 256, teaches that information contains slot format).

With regard to claim 227, Kim also teaches: wherein the system parameters comprise at least one parameter for the random access channel (step 2005: form UL DPCCH which can be viewed as random access channel. And see page 28, paragraph 254, teaches that information contains slot format).

With regard to claim 229, Kim also teaches: wherein the forward channel has a configurable duration, and wherein the system parameters indicate the duration of the forward channel (step 2007: form DL data channel/DPDCH which can be viewed as forward channel. And see page 28, paragraph 255, teaches that information contains slot format).

With regard to claim 230, Kim also teaches: wherein the reverse channel has a configurable duration, and wherein the system parameters indicate the duration of the reverse channel (step 2003: form UL DPDCH which can be viewed as reserve channel. And see page 28, paragraph 253, teaches that information contains slot format).

With regard to claim 231, Kim also teaches: wherein the random access channel has a configurable duration, and wherein the system parameters indicate the duration of the random access channel (step 2005: form UL DPCCH which can be viewed as random access channel. And see page 28, paragraph 254, teaches that information contains slot format).

With regard to claim 232, Li et al. teaches: wherein scheduling information for a user terminal indicates one of multiple transmission modes comprising at least one of a

diversity mode, a spatial multiplexing mode, and a beam-steering mode (page 3, paragraphs 32, 37-40).

With regard to claim 233, Li et al. teaches: wherein scheduling information for a user terminal comprises at least one of timing adjustment information, power control information, and rate information (page 5, paragraphs 70-73).

With regard to claim 234, Li et al. teaches: means for receiving each user request for system access at one of multiple data rates supported for the random access channel (page 3, paragraph 31).

With regard to claim 235, Li et al. teaches: means for determining a data rate of each user request for system access based on a data rate indicator sent with the user request (page 5, paragraphs 70-71).

With regard to claim 236, Sjoberg teaches: means for receiving each user request for system access starting at one of multiple slots available for the random access channel (column 4, lines 20-30).

Allowable Subject Matter

7. Claims 120, 125, 228, and 241-247 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pedersen et al. (US 7,480,278).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS R. SMITH whose telephone number is (571)270-1096. The examiner can normally be reached on Mon-Thurs: 7:30 am - 5:00 p.m. and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on 571 272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRS 4/23/10
/Pankaj Kumar/
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